

GenCore version 5.1.3
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OM protein - protein search, using sw model

Run on: October 11, 2002, 08:19:20 : Search time 27 Seconds
(without alignments)
832.939 Million cell updates/sec

Title: US-09-818-954A-1
Perfect score: 722
Sequence: 1 MKLAFLECPMALLLAGYV.....VAIRDCGACSTATTECENT 130

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 562222 seqs, 172994929 residues

Total number of hits satisfying chosen parameters: 562222

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

SPTREMBL_19:*
1: sp_archaea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_oranelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_virus:*
16: sp_bacteriaph:*
17: sp_archaeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	211	29.2	128	13	091997 acipenser b
2	208	28.8	140	13	098ty3 mylopharyng
3	205.5	28.5	123	13	0902k1 rana ridibu
4	204.5	28.3	142	13	09DG92 oncorhynch
5	201.5	27.9	137	13	090WC1 xenopus lae
6	201	27.8	140	13	09DG80 ictalurus p
7	195	27.0	145	13	090W55 parailichth
8	194.5	26.9	146	13	090W19 hippoglossu
9	192.5	26.7	131	13	090W63 scyllorhinu
10	191.5	26.5	145	13	090WD2 parailichth
11	189	26.2	137	13	091999 acipenser b
12	189	26.0	146	13	09DEH0 pagrus majo
13	188	26.0	138	13	090W69 rana ridibu
14	186.5	25.8	88	13	09W6Q7 salmo salar
15	180	24.9	135	11	0924A7 cavia porce
16	180	24.9	141	11	0924A8 cavia porce

17	179	24.8	121	13	090W64	090W64 scyllorhinu
18	178	24.7	139	11	062778	062778 ratus norv
19	175	24.2	127	11	0924A6	0924A6 cavia porce
20	174	24.1	165	6	09BEH2	09BEH2 macaca fasc
21	173.5	24.0	142	6	09BD19	09BD19 panthera li
22	168.5	23.3	132	13	09DG81	09DG81 ictalurus p
23	167.5	23.2	141	6	095J85	095J85 monodelphis
24	165	22.9	129	6	095J82	095J82 monodelphis
25	164	22.7	165	6	09BEH1	09BEH1 macaca fasc
26	161	22.3	129	6	09BD30	09BD30 panthera li
27	160	22.2	150	13	013051	013051 cyprinus ca
28	159	22.0	147	13	013052	013052 ctropharyn
29	159	22.0	150	13	09PW21	09PW21 aristichth
30	158	21.9	125	13	091992	091992 conger cong
31	157	21.7	109	13	091998	091998 acipenser b
32	154.5	21.4	138	4	016153	016153 homo sapien
33	154	21.3	89	6	046618	046618 equus zebra
34	154	21.3	82	6	046619	046619 equus hemio
35	149.5	20.7	82	6	046622	046622 ceratotheri
36	149	20.6	123	13	09W6Q8	09W6Q8 salmo salar
37	148	20.5	130	13	098TY2	098TY2 mylopharyng
38	145	20.1	165	6	09GL37	09GL37 macaca mulla
39	145	20.1	165	11	099P48	099P48 mus musculu
40	144	19.9	138	6	095J88	095J88 monodelphis
41	144	19.9	149	13	09PVW9	09PVW9 carassius a
42	144	19.9	150	13	013049	013049 carassius a
43	143.5	19.9	137	13	09DG93	09DG93 oncorhynch
44	137.5	19.0	80	11	063013	063013 ratus norv
45	134.5	18.6	130	13	09YTB3	09YTB3 carassius a

ALIGNMENTS

RESULT 1
ID 091997 PRELIMINARY; PRT: 128 AA.
AC 091997;
DC 01-OCT-2000 (TREMUREL. 15, Created)
DT 01-OCT-2000 (TREMUREL. 15, Last sequence update)
DT 01-DEC-2001 (TREMUREL. 19, Last annotation update)
DE FOLLICLE-STIMULATING HORMONE PRECURSOR.
GN FSH.
OS Acipenser baeri (Siberian sturgeon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Chondrostei; Acipenseriformes; Acipenseridae;
OC Acipenserinae; Acipenser.
OX NCBI_TaxID=27689;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=PTUITARY;
RX MEDLINE=20318422; PubMed=10859263;
RA Querat B., Sellouk A., Salmon C.;
RT "Phylogenetic analysis of the vertebrate glycoprotein hormone family
including new sequences of sturgeon (Acipenser baeri) subunits of the
two gonadotropins and the thyroid stimulating hormone."
RL Biol. Reprod. 63:222-228(2000).
DR EMBL; AJ251658; CAB93504.1; -.
DR HSSP; P01233; 1XUL.
DR InterPro; IPR000359; Cys_knot.
DR InterPro; IPR001545; Glyco_hormone_beta.
DR Pfam; PF00007; Cys_knot; 1.
DR SMART; SM00068; GHR; 1.
DR PROSITE; PS00689; GLYCO_HORMONE_BETA_2; 1.
KW Signal.
FT SIGNAL 1 20 POTENTIAL.
FT CHAIN 21 128 FOLLICLE-STIMULATING HORMONE.
SQ SEQUENCE 128 AA; 13785 MW; 712EF76F0757D70 CRC64;
Query Match 29.2%; Score 211; DB 13; Length 128;
Best Local Similarity 42.7%; Pred. No. 1.7e-16;
Matches 41; Conservative 15; Mismatches 38; Indels 2; Gaps 2;

QY	36	CAVREFFETLAKRGGRG-RRIITDAGCSCSEMEWRIPIERPIEAHNHRCSTYNEKOVYU	94
	:	:	:
	:	:	:
	:	:	:
Db	22	CALENITITIGIEKDCGCNCVSVMTSCAGRCIL-QADVYKSSISLTVLCSFEKREISVYU	80
QY	95	KLPNCAGVDPPEYTPVAIRRCSCGACSTATTSCENI	130
Db	81	OLPNCPEHVDPIYTPVASCSCGGCAGATYDCCGTL	116

RESULT 2	
098TY3	
ID	098TY3
AC	098TY3;
DT	01-JUN-2001 (TReMBLrel. 17, Created)
DT	01-JUN-2001 (TReMBLrel. 17, Last sequence update)
DT	01-DEC-2001 (TReMBLrel. 19, Last annotation update)
DE	LUTETINIZING HORMONE BETA SUBUNIT.
OS	Mylopharyngodon plicatus.
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC	Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
OC	Cypriniformes; Cyprinidae; Mylopharyngodon.
OX	NCBI_TaxID=75356;

RP SEQUENCE FROM N.A.
RA Bayer-Eizenberg D., Rosenfeld H., Zmora N., Yaron Z., Elizur A.;
RT "Isolation and characterization of the black carp LH beta subunit.",
RL Submitted (NOV-2000) to the EMBL/Genbank/DBJ databases.
DR EMBL; AF319960; AAK07414.1; -.
DR HSSP; P01233; 1XUL.
DR InterPro; IPR000359; Cys_knot.
DR InterPro; IPR001545; Glyco_hormone_beta.
DR Pfam; PF00007; Cys_knot.1.
DR SMART; SM00068; GHb; 1.
DR PROSITE; PS00261; GLYCO_HORMONE_BETA_1; UNKNOWN_1.
DR PROSITE; PS00689; GLYCO_HORMONE_BETA_2; 1.
SQ SEQUENCE 140 AA; 15820 MW; 8F1273F35D5A010 CRC64;

Query Match	28.8%	Score 208	DB 13	Length 140
Best Local Similarity	37.9%	Pred. No. 4e-16		
Matches 44	Conservative 19	Mismatches 49	Indels 4	Gaps 3

[illegible]

RESULT 3	
Q90ZK1	
ID Q90ZK1	PRELIMINARY;
123 AA	PRT;

DT 01-DEC-2001 (TREMBLrel. 19, Created)
 DT 01-DEC-2001 (TREMBLrel. 19, Last sequence update)
 DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
 DE POLYPEPTIDE STIMULATING HORMONE BETA SUBUNIT PRECURSOR
 DE (FRAGMENT).
 OS Rana ridibunda (laughing frog) (Marsh frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
 OC Amphibia; Batrachia; Anura; Neobatrachia; Ranoidae; Rana
 OX NCBI_TaxID=8406;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=PIUITARY;
 RC Querat B.;
 RT "Evolution of glycoprotein hormones in gnathostomes.";
 RL Submitted (MAY-2001) to the EMBL/GenBank/DBJ databases.

KW	Signal.	1	1	POTENTIAL.
FT	NON_TER	<1	16	
FT	SIGNAL			

FT	CHAIN	17	123	FOLICLE STIMULATING HORMONE BETA
FT				SUBUNIT.
SQ	SEQUENCE	123 AA;	13678 MW;	9:6C3E72EECCA85 CRC64;

Query Match	28.5%	Score 205.5	DB 13	Length 123
Best Local Similarity	40.5%	Prec: No. 6.8e-16		
Matches 45	Conservative 15	Mismatches 44	Indels 7	Gaps 4

QY 19 YGCVLGASSNLTETFGCAVREFETLAKKPCGRGRLITTDGCM--GSCFEMWELIlepp 76
 Db 3 YGLVL--FMWMLSATCETLSNITTVLEFEEC-GACISVNAVTCMSGVCYTMIDNLMWY PQR 58
 QY 77 IEAHHRRGCTVNETKQVTVLPLNCARCPDVPFTYTPAIRRCOGGASTATTEFC 127
 Db 59 SE-KQGCTVTEIYETVAVIPGCANVMVFETTPYPAADCCHGGRNSSETTD 108

RESULT 4	
Q9DG92	
ID Q9DG92	PRELIMINARY;
1000000000	PRT; 142 AA

DT 01-MAR-2001 (TEMBLrel, 16, Create1)
 DT 01-MAR-2001 (TEMBLrel, 16, Last sequence update)
 DT 01-DEC-2001 (TEMBLrel, 19, Last annotation update)
 DE LUTEINIZING HORMONE BETA SUBUNIT.
 GN LH BETA.
 OS Oncorhynchus mykiss (Rainbow trout; (Salmo gairdneri)).
 OS Ptilinopus (Ptilinopus) (Ptilinopus) (Ptilinopus)

OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
EC Eukaryota; Metazoa; Chordata; Craniata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8022;
RN [1]

RP SEQUENCE FROM N.A.
RA Morita T., Yoshizaki G., Takeuchi T.;
RT "rainbow trout luteinizing hormone beta subunit mRNA."
RL Submitted (NOV-2000) to the EMBL/GenBank/DBD databases

DR HSSP; P01233; 1XUL.
DR InterPro; IPR000359; Cys_knot.
DR InterPro; IPR01545; Glyco_hormone_beta
DR Pfam; PF00007; Cys_knot; 1.

DR PROSITE; PS00261; GLYCO_HORMONE_BETA_1; UNKNOWN_1.
SQ SEQUENCE 142 AA; 15824 MW; 7C3993CAF1FAE55A CRC64;

Query Match	28.3%	Score 204.5	DB 13	Length 142
Best Local Similarity	37.1%	Pred. No. 1e-15		
Matches 46	Conservative 20	Mismatches 49	Indels 9	Gaps 5

OY 6 LFLGPMALLLAGVCV-LGASSONLETFVGC(AKRETEPLAKRKC-RGLRTITDAQWGR 63
| : | | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
Db 4 LHVGILLISLL---CILLEPVEGSJ--MQPCPIQNTVSVERKGCPCLVLIGPPICSH 57

QY	124	TTEC	127	QY
Db	117	TSDC	120	QY
Db	58	CVT	KEPEFKSPFSTVGVHVCYTRDVRERETLRLPDCEPWWDPHVTYTYVALSCDCLCMD	116
QY	64	CEMEKPLEPPEPTIEAHNRVCTYNETKQVTKLPCNCAQVDPFETTYTYVALSCDCACTA	123	QY

RESULT 5	
Q90WC1	
ID Q90WC1	PRELIMINARY;
	PRT; 137 AA.

05 Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipiloidea; Pipidae;
DE LUTROPIDIN BETTA SUBUNIT. 19, last annotation update)
DT 01-DEC-2001 ([TREMBLER](#). 19, last sequence update)
DT 01-DEC-2001 ([TREMBLER](#). 19, last sequence update)
DT 01-DEC-2001 ([TREMBLER](#). 19, last sequence update)
DT 01-DEC-2001 ([TREMBLER](#). 19, last sequence update)

OC Xenopodinae; Xenopus.
 RN NCBI_TaxID=8355;
 AC [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=PITUITARY;
 RX MEDLINE=21309951; PubMed=11404476;
 RA Huang H., Cai L., Remo B.F., Brown D.D.;
 RT "Timing of metamorphosis and the onset of the negative feedback loop
 between the thyroid gland and the pituitary is controlled by type II
 Iodothyronine deiodinase in Xenopus laevis";
 RL Proc. Natl. Acad. Sci. U.S.A. 98:7348-7353(2001).
 DR EMBL: AF360397; AAK49986.1; -
 SO SEQUENCE 137 AA; 15272 MW; 6B215F1200FE197 CRC64;

Query Match 27.9%; Score 201.5; DB 13; Length 137;
 Best Local Similarity 35.8%; Pred. No. 2.2e-15;
 Matches 44; Conservative 16; Mismatches 54; Indels 9; Gaps 4;

QY 6 LFLGPMALLLAGYGVLAGSSGNLRTFVGCAVREFFPLAKKPGCR-GLRITTDACMGRC 64
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 DB 1 MFRSQVLTLLGTY---LSAVQGRRL----CHPINATISAKKDCPCIVTLITTYCTGYC 53
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 QY 65 ETWEKPILEPPYIEAHNRVCTYNETKQVTKLPNCAPGVDPFYTPVAIRDCGACSTAT 124
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 DB 54 LT-RDPEFKNALSSVYQNICTYNEIRDTIKLPCLPQTDPEFTYPAVASCCKNQCKMDY 112
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 QY 125 TEC 127
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 DB 113 SDC 115

RESULT 6
 Q9DG80 PRELIMINARY; PRT; 140 AA.
 AC Q9DG80;
 ID Q9DG80;
 DT 01-MAR-2001 (TREMBLrel. 16, Created)
 DT 01-MAR-2001 (TREMBLrel. 16, Last sequence update)
 DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
 DE GONADOTROPIN BETA 2 SUBUNIT.
 OS Ictalurus punctatus (Channel catfish).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Osteariophysi;
 OC Siluriformes; Ictaluridae; Ictalurus.
 NCBI_TaxID=7998;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=KANSAS;
 RA Liu Z.J., Kim S., Karsi A., Dunham R.;
 RT "Channel catfish gonadotropin beta-subunits: cDNA cloning and their
 expression during ovulation";
 RL Submitted (DEC-1998) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AF112192; AAG32156.1; -
 DR HSSP: P01233; 1XU.
 DR InterPro: IPR000359; Cys_knot.
 DR InterPro: IPR001545; Glyco_hormone_beta.
 DR Pfam: PF00007; Cys_knot; 1.
 DR SMART: SM00068; GHB; 1.
 DR PROSITE: PS00261; GLYCO_HORMONE_BETA_1; UNKNOWN_1.
 SO SEQUENCE 140 AA; 15787 MW; AAY4CAA7E3D2882 CRC64;

Query Match 27.8%; Score 201; DB 13; Length 140;
 Best Local Similarity 36.1%; Pred. No. 2.5e-15;
 Matches 43; Conservative 22; Mismatches 46; Indels 8; Gaps 4;

QY 12 ALLLAGYGVLAGSSGNLRTFV--GCAVREFFPLAKKPGC-RGLRITTDACMGRCETWE 68
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 DB 7 SFLLL-----CFMNSFSPAQSYILPHCEPVNETVSVEKDCGPKCLVPTAICSGHCLF-K 61
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 QY 69 KPILEPPYIEAHNRVCTYNETKQVTKLPNCAPGVDPFYTPVAIRDCGACSTATTEC 127
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 DB 62 EPVKSPEFSNIYQHVCTYRDVRYETVRLPDCRPVDPHVTYPAVASECTCTMDTSDC 120

RESULT 7
 Q90W55 PRELIMINARY; PRT; 145 AA.
 AC Q90W55;
 ID Q90W55;
 DT 01-DEC-2001 (TREMBLrel. 19, Created)
 DT 01-DEC-2001 (TREMBLrel. 19, Last sequence update)
 DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
 DE GONADOTROPIN (GTH-II) BETA SUBUNIT.
 GN GTH-II BETA.
 OS Parachanna olivacea (Flounder).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
 OC Pleuronectidae; Parichthyidae; Parichthys.
 NCBI_TaxID=8255;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=PITUITARY;
 RX MEDLINE=21216564; PubMed=11316417;
 RA Kajimura S., Yoshida Y., Suzuki M., Aida K.;
 RT "cDNA cloning of two gonadotropin beta subunits (GTH-Ib and
 -IIb) and their expression profiles during gametogenesis in the
 Japanese flounder (Parichthys olivacea)";
 RL Gen. Comp. Endocrinol. 122:117-129(2001).
 DR EMBL: AB042423; BAB47388.1; -
 SO SEQUENCE 145 AA; 16295 MW; BDDCE52EE3E750CC CRC64;

Query Match 27.0%; Score 195; DB 13; Length 145;
 Best Local Similarity 38.7%; Pred. No. 1.3e-14;
 Matches 36; Conservative 18; Mismatches 37; Indels 2; Gaps 2;

QY 36 CAVREFFPLAKKPGC-RGLRITTDACMGRCETWEKPILEPPYIEAHNRVCTYNETKQVTK 94
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 DB 36 CLLINQVLSLEKGCPCRTVETTCISGHCKT-KDPAKIPPLNNYQHVCTYQELYYKTF 94
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 QY 95 KLPNCAPGVDPFYTPVAIRDCGACSTATTEC 127
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :
 DB 95 ELDPCEPVDPYTPVAVSCYCGRCALNTSDC 127

RESULT 8
 Q90W19 PRELIMINARY; PRT; 146 AA.
 AC Q90W19;
 ID Q90W19;
 DT 01-DEC-2001 (TREMBLrel. 19, Created)
 DT 01-DEC-2001 (TREMBLrel. 19, Last sequence update)
 DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
 DE LH-BETA PROTEIN PRECURSOR.
 GN LH-BETA.
 OS Hippoglossus hippoglossus (Atlantic halibut).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
 OC Pleuronectidae; Pleuronectidae; Hippoglossus.
 NCBI_TaxID=8267;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Weltzien F.A., Kobayashi T., Andersson E., Norberg B., Andersen O.;
 RT "Molecular characterization of FSH-beta, LH-beta, and alpha-subunit of
 Atlantic halibut (Hippoglossus hippoglossus)";
 RL Submitted (OCT-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AJ417769; CAD10502.1; -
 KW Signal.
 FT SIGNAL 1 31
 FT CHAIN 32 146 LH-BETA SUBUNIT.
 SO SEQUENCE 146 AA; 16519 MW; 36C1PA04E0EF7C23 CRC64;

Query Match 26.9%; Score 194.5; DB 13; Length 146;
 Best Local Similarity 38.0%; Pred. No. 1.5e-14;
 Matches 35; Conservative 19; Mismatches 33; Indels 5; Gaps 3;
 QY 38 VREFFPLAKK--PCRGIRITTDACMGRCETWEKPILEPPYIEAHNRVCTYNETKQVTK 95
 : : | | | | | : | | | | | : | | | | | : | | | | | : | | | | | :

Db 40 IKQMSLEKGGPKCH--TWETITSGCHNT-KDPYIKIPLNIQHVCTYELIYKTFE 96

QY 96 LPNCARGVDPFTTYYPVALRCDCGACSTATTEC 127
||:| ||||: ||||: | || |: ||:|
Db 97 LPDCPQVDPFTTYYPVANSCTGCRALNLTSDC 128

RESULT 9

ID	PRELIMINARY;	PRT;	131 AA.
Q90W63			

DT 01-DEC-2001 (TREMBlrel. 19, Created)
DT 01-DEC-2001 (TREMBlrel. 19, last sequence update)
DT 01-DEC-2001 (TREMBlrel. 19, last annotation update)
DE LUTHEINIZING HORMONE BETA SUBUNIT PRECURSOR.
GN LH BETA.
OS Scyllorhinus canicula (Spotted dogfish) (Spotted catshark).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
OC Elasmobranchii; Galeomorphii; Galeoidea; Carchariaformes;
OC Scyllorhinidae; Scyllorhinus.
RX NCBI_TaxID=7830.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=PIUTARY;
RA Querat B.;
RT "Duality of gonadotropins in gnathostomes."; [PMID:11500000](#)
RL Submitted (APR-2001) to the EMBL/GenBank/DBU databases.
DR EMBL; AJ310345; CAC43236.1; -.
KW signal.
FT SIGNAL. 1 19 POTENTIAL.
FT CHAIN 20 131 LUTHEINIZING HORMONE BETA SUBUNIT.
SQ SEQUENCE 131 AA; 14656 MW; D3F852C626A6A77 CRC64;

Query match	26.78;	Score 192.5;	DB 13;	Length 131;
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Matches 43; Conservative 14; Mismatches 50; Indels 9; Gaps 4;

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OY 13 LLLAGYCVILGASSGNLTFTVGCAVREFTELLAKPGCR-GLRITTDACMGRCETWEKPI 71
      |||| | :| | :|| | | | | :
DB 7 LLLLA--TCFYSYOGRHL-----CHPTNVTLSAEKDECPICVTLTTSICGGCPTRES-V 58

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Qy      72 LEPPIEAHHRVCTYNNEKQVTVKLENCAPGVDPFTYTPVAIRCDCGACSTATTEC 127
      : | : | | | : : : | | | | | | : | : |
Db      59 YKSPLLSVQHCTYKKEIRYETIRLEPCPTGVDSFTYTPVANSCECNLCAMDYTD 114

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RESULT 10

ID	Q90WD2	PRELIMINARY;	PRT;	145	AA
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DT 01-DEC-2001 (TREMBlrel.. 19, Created)
DT 01-DEC-2001 (TREMBlrel.. 19, last sequence update)
DT 01-DEC-2001 (TREMBlrel.. 19, last annotation update)
DE GONADOTROPIN II BETA SUBUNIT.
OS Parulichthys olivaceus (Flounder).
OC Euryarchaeta: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi:
OC Actinopterygii: Neopterygii: Teleostei: Euteleostei: Neoteleostei:
OC Acanthomorphi: Acanthopterygii: Percomorpha: Pleuronectiformes:
OC Pleuronectidae: Parulichthyidae: Parulichthys.
OX NCBI_TaxID=8255;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=PIUTARY;
RA Lee J.H., Kim Y.T.,
RT "Molecular Cloning and sequencing of flounder (Parulichthys olivaceus)
RL gonadotrophin-I and -II subunits".
RT Submitted (MAY-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF268694; AAK58602.1; -
SQ SEQUENCE 145 AA; 16339 MW; 919B3A570467B8CA CRC64;

Query Match	26.5%	Score 191.5;	DB 13;	Length 145;
Best Local Similarity	38.0%;	Pred. No. 3.2e-14;		
Matches 35; Conservative	19;	Mismatches 33;	Indels 5;	Gaps 3;

QY 38 VRETFELAKK - GGCGGLITTDOMGRCHEMERKILPEPPIEAHHNHYCNSTKOUYAK 95
 Db 39 IKQWVSLERKGGCKCH - IVETTTCSGHCKT KDQVAKIPLMNYQVHTYQELHYKTFE 95
 QY 96 LPNCAGVDFEYTYPVAIKDCGAFCSSTATTEC 127
 Db 96 LPDCPFGVDPTYSYPAVASCYGRALNSTD 127

RESULT 11

ID	PRELIMINARY;	PRT;	137	AA.
Q9I999				

DT 01-OCT-2000 (TREMBLrel_15, Created)
 DT 01-OCT-2000 (TREMBLrel_15, Last sequence update)
 DT 01-DEC-2001 (TREMBLrel_19, Last annotation update)
 DE LUTHEINIZING HORMONE PRECURSOR.
 GN LH.
 OS Acipenser baerii (Siberian sturgeon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Chondrostei; Acipenseriformes; Acipenseridae;
 OC Acipenserinae; Acipenser.
 NCBI_TaxID=27689;
 OX [1]
 RN
 RP SEQUENCE FROM N.A.
 RC TISSUE=PIUTUARY;
 RX MEDLINE=20318422; PubMed=10859263;
 RA Querat B., Sellouk A., Salmon C.;
 RT "Phylogenetic analysis of the vertebrate glycoprotein hormone family
 RT including new sequences of sturgeon (Acipenser baerii) subunits of the
 RT two gonadotropins and the thyrot stimulating hormone.";
 RL Biol. Reprod. 63:222-228(2000).
 DR EMBL; AJ251656; CAB93502.1; -.

DR InterPro; IPR000359; Cys_knot.

```
DR Pfam; PF00007; Cys_knot; 1.
DR SMART; SM00068; GHb; 1.
KW Signal.
```

FT	CHAIN	23	137	LUTEINIZING HORMONE.
SQ	SEQUENCE	137 AA;	14757 MW;	37CFEB0BB2955607 CRC64;

Matches

11 MALLLAGYGCVLGASSGNLRTFVGCAVREFFFLAKKPGC-RGLRITTDACWGRCEWEK 69

QY 11 MALLLGGVCGIASSGNLRFTVGCAVREPFLEAKRKG-C-RGRITTTDAGMGCETWEK 65
:::|||||::|||::|:
Db 5 VSLILLFLFSALTVSRSS-SIRL---CEPYNSTISAREKECTCLLIQTSTICSSCPT-KD 55
:
QY 70 PILEPPYEIAHHRVCYINETKOVTKALPCMGADVPDYTTYTPVAIRCDGACSTRATEEC 127
:::|||||::|||::|:
Db 60 PVFSAALSTVOAHQATCYIKDLREFATYLLDPCHFGVDPHHTFFPLATSCESCILRNESDSG 117
:
:

RESULT 12

ID	PRELIMINARY;	PRT;	146	AA
Q9DEH0				

DT 01-MAR-2001 (TEMBIrel. 16, Created)
DT 01-MAR-2001 (TEMBIrel. 16, last sequence update)
DTF 01-DEC-2001 (TEMBIrel. 19, last annotation update)
DE GOMADOTROPIN II BETA SUBUNIT PRECURSOR.
OS Pagrus major (red sea bream) (Chrysophrys major).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
OC Sparidae; Pagrus.
OX NCBI_TaxID=143350;
RN [1]
RP SEQUENCE FROM N.A.

RA MEDLINE=20318432; PubMed=10859273;
RA Gen K., Okuzawa K., Senthilkumaran B., Tanaka H., Moriyam S.,
RA Kagawa H.,
RT "unique expression of gonadotropin-I and -II subunit genes in male and
RT female red seabream (Pagrus major) during sexual maturation."
RL Biol. Reprod. 63:308-319(2000).
DR EMBL: AB028213; BAB18564.1; -.
DR HSSP: P01233; 1XUL.
DR InterPro: IPR000359; Cys_knot.
DR InterPro: IPR001545; Glyco_hormone_beta.
DR Pfam: PF00007; Cys_knot; 1.
DR SMART: SM00068; GHB; 1.
DR PROSITE: PS00261; GLYCO_HORMONE_BETA_1; UNKNOWN_1.
KW Signal.
FT SIGNAL 1 14 POTENTIAL.
SQ SEQUENCE 146 AA; 16320 MW; 1EBF429CFE5BEF82 CRC64;

Query Match 26.2%; Score 189; DB 13; Length 146;
Best Local Similarity 39.8%; Pred. No. 6.3e-14;
Matches 37; Conservative 15; Mismatches 37; Indels 4; Gaps 3;

QY 36 CAVEFFFLAKKPGCRGR-ITTDACGRCETWEKPILEPPYIAHHRVCTYNETKQTV 94
DB 39 COLINQTVSLEKEGCPCHPEVETICSGHCIT-KDPVAKTRYVYQH--VCTYRDLHYKTF 95
QY 95 KLPCAGVDPFYTPYPAIRDCGCGCATTEC 127
DB 96 ELPCPGVDPFYTPYPAVSCGCLCAMDTSDC 128

RESULT 13
Q90MG9
ID Q90MG9 PRELIMINARY; PRT; 138 AA.
AC Q90MG9;
DT 01-DEC-2001 (TREMBlrel. 19, Created)
DT 01-DEC-2001 (TREMBlrel. 19, Last sequence update)
DT 01-DEC-2001 (TREMBlrel. 19, Last annotation update)
DE LUTEINIZING HORMONE BETA SUBUNIT PRECURSOR.
OS Rana ridibunda (Laughing frog) (Marsh frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Neobatrachia; Ranioidea; Ranidae; Rana.
OX NCBI_TaxID=8406;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=PTUITARY;
RA Querat B.:
RT "Evolution of glycoprotein hormones in gnathostomes."
RL Submitted (MAY-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL: AJ211355; CAC39252.1; -.
KW Signal.
FT SIGNAL 1 26 POTENTIAL.
FT CHAIN 27 138 LUTEINIZING HORMONE BETA SUBUNIT.
SQ SEQUENCE 138 AA; 15701 MW; 9C1EB077B34B6CF CRC64;

Query Match 26.0%; Score 188; DB 13; Length 138;
Best Local Similarity 35.3%; Pred. No. 7.8e-14;
Matches 41; Conservative 16; Mismatches 49; Indels 10; Gaps 3;

QY 13 LLLAGYCVLGAASSGNLRFVGCAYREFFFLAKKPGCR-GIRITTDACGRCETWEKPI 71
DB 15 LLRAHLSAVGGRHL-----CHLANATISAEKDHCPVCVTFPTICSGYQTLDPV 65
QY 72 LEPPYIAHHRVCTYNETKQTVKLPNCAGVDPFYTPYPAIRDCGCGCATTEC 127
DB 66 HKTALFPFKOKICTYKEIRDTIKLPDLPGTDFPYVALSCYCDCKMDYSDC 121

RESULT 14
Q9M6Q7
ID Q9M6Q7 PRELIMINARY; PRT; 88 AA.
AC Q9M6Q7;
DT 01-NOV-1999 (TREMBlrel. 12, Created)
DT 01-NOV-1999 (TREMBlrel. 12, Last sequence update)

DT 01-JUN-2001 (TREMBlrel. 17, Last annotation update)
DE GONADOTROPIN II BETA SUBUNIT (FRAGMENT).
OS Salmo salar (Atlantic salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
OX NCBI_TaxID=8030;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=PTUITARY;
RA Yadeite F., Goksøyr A., Male R.;
RT "Modulation of pituitary gonadotropin mRNA levels in juvenile Atlantic
RT salmon by 4-nonylphenol."
RL Submitted (APR-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF146151; AAD34593.1; -.
DR HSSP: P01233; 1XUL.
DR InterPro: IPR000359; Cys_knot.
DR InterPro: IPR002400; GF_cysknot.
DR InterPro: IPR001545; Glyco_hormone_beta.
DR Pfam: PF00007; Cys_knot; 1.
DR PRINTS: PR00438; GFCYSKNOT.
DR SMART: SM00068; GHB; 1.
DR PROSITE: PS00261; GLYCO_HORMONE_BETA_1; UNKNOWN_1.
DR PROSITE: PS00689; GLYCO_HORMONE_BETA_2; 1.
FT NON_TER 1 1
FT NON_TER 88 88
SQ SEQUENCE 88 AA; 9975 MW; A6E9CB651E165536 CRC64;

Query Match 25.8%; Score 186.5; DB 13; Length 88;
Best Local Similarity 41.2%; Pred. No. 7.2e-14;
Matches 33; Conservative 15; Mismatches 29; Indels 3; Gaps 2;

QY 48 PGCRGLRITTDACGRCETWEKPILEPPYIAHHRVCTYNETKQTVKLPNCAGVDPFY 107
DB 2 PTC--LVLTPTICSGHCYT-KEPVKSPSTVYQHVCYRDVRETRIRLPDPPVDDHV 58
QY 108 TYPVAIRDCGCGCATTEC 127
DB 59 TYPVALSCDCSLCMMNTSDC 78

RESULT 15
Q924A7
ID Q924A7 PRELIMINARY; PRT; 135 AA.
AC Q924A7;
DT 01-DEC-2001 (TREMBlrel. 19, Created)
DT 01-DEC-2001 (TREMBlrel. 19, Last sequence update)
DT 01-DEC-2001 (TREMBlrel. 19, Last annotation update)
DE LUTEINIZING HORMONE BETA SUBUNIT PRECURSOR (FRAGMENT).
OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Hystriognathi; Cavidae; Cavia.
OX NCBI_TaxID=10141;
RN [1]
RP SEQUENCE FROM N.A.
EX MEDLINE=21255925; PubMed=11357063;
RA Sherman G.B., Hellman D.F., Hoss A.J., Bunick D., Lund L.A.;
RT "Messenger RNAs encoding the beta subunits of guinea pig (Cavia
RT porcellus) luteinizing hormone (glnH) and putative chorionic
RT gonadotropin (gpcG) are transcribed from a single-copy glnH/Cgbeta
RT gene."
RL J. Mol. Endocrinol. 26:267-280(2001).
DR EMBL: AF356595; AAK64306.1; -.
KW Signal.
FT NON_TER 1 1
FT SIGNAL 15 14 POTENTIAL.
FT CHAIN 15 135 LUTEINIZING HORMONE BETA SUBUNIT.
SQ SEQUENCE 135 AA; 14432 MW; A44C63DBDC5607AE CRC64;

Query Match 24.9%; Score 180; DB 11; Length 135;
Best Local Similarity 35.4%; Pred. No. 6.3e-13;
Matches 46; Conservative 19; Mismatches 41; Indels 24; Gaps 7;

